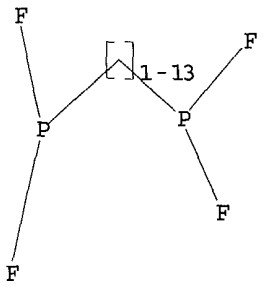
L Number	Hits	Search Text	DB	Time stamp
1	39	568/8.ccls. and (fluoro or fluoride)	USPAT; US-PGPUB	2003/12/15 13:03
2	36	568/16.ccls. and (fluoro or fluoride)	USPAT; US-PGPUB	2003/12/15 13:03

=>
Uploading 10084681.str

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 10:35:29 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 52 TO ITERATE

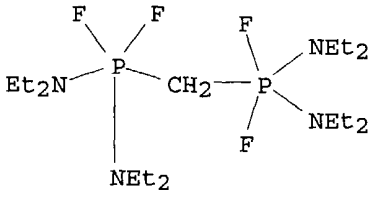
100.0% PROCESSED 52 ITERATIONS 5 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 608 TO 1472
PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

=> d scan

L2 5 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphoranediamine, 1,1'-methylenebis[N,N,N',N'-tetraethyl-1,1-difluoro-(9CI)
MF C17 H42 F4 N4 P2



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

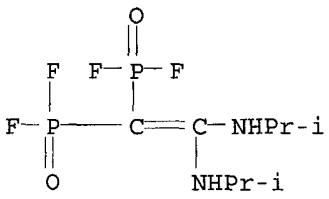
=> s l1 full
FULL SEARCH INITIATED 10:35:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 949 TO ITERATE

100.0% PROCESSED 949 ITERATIONS 71 ANSWERS
SEARCH TIME: 00.00.01

L3 71 SEA SSS FUL L1

=> d scan

L3 71 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonic difluoride, [bis[(1-methylethyl)amino]ethenylidene]bis- (9CI)
MF C8 H16 F4 N2 O2 P2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

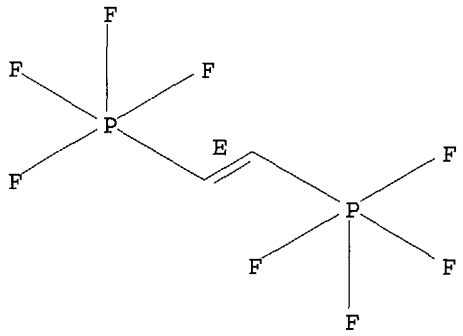
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s l3 not n/els
15752069 N/ELS
L4 60 L3 NOT N/ELS

=> d scan

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, 1,2-ethenediylbis[tetrafluoro-, (E)- (9CI)
MF C2 H2 F8 P2

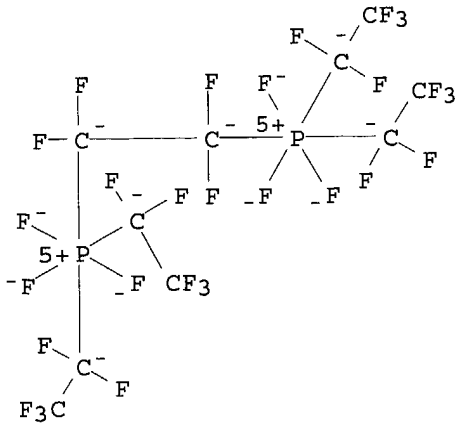
Double bond geometry as shown.



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

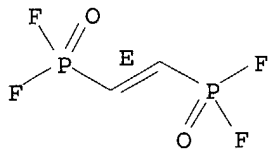
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphate(2-), hexafluorotetrakis(pentafluoroethyl)[.mu.-(1,1,2,2-tetrafluoro-1,2-ethanediyl)]di- (9CI)
MF C10 F30 P2

CI CCS, COM



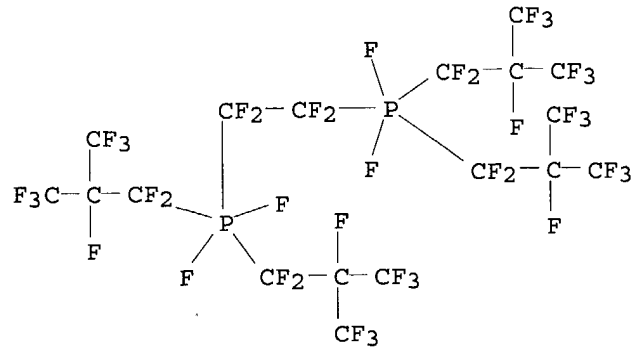
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonic difluoride, 1,2-ethenediylbis-, (E)- (9CI)
MF C2 H2 F4 O2 P2

Double bond geometry as shown.

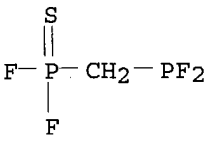


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis[1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propyl]- (9CI)
MF C18 F44 P2

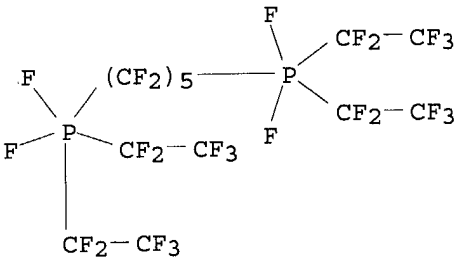


L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonothioic difluoride, [(difluorophosphino)methyl]- (9CI)
MF C H2 F4 P2 S

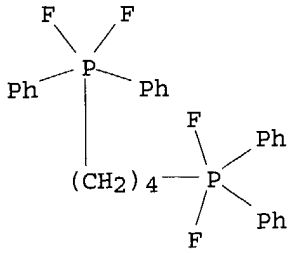


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

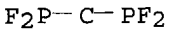
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, (1,1,2,2,3,3,4,4,5,5-decafluoro-1,5-pentanediyl)bis[difluorobis(pentafluoroethyl)-, stereoisomer (9CI)
MF C13 F34 P2

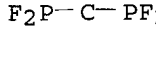


L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, 1,4-butanediylbis[difluorodiphenyl- (9CI)
MF C28 H28 F4 P2

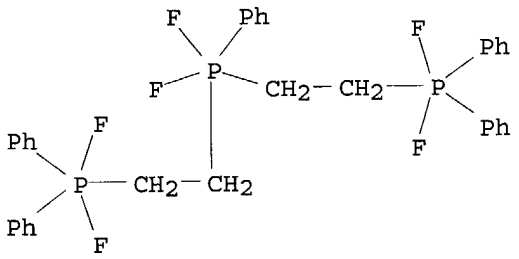


L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Methylene, bis(difluorophosphino)- (9CI)
MF C F4 P2

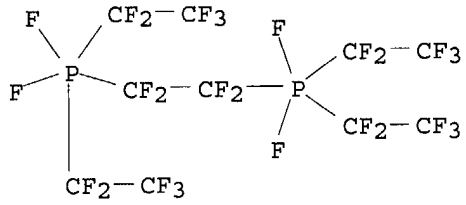




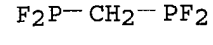
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, bis[2-(difluorodiphenylphosphoranyl)ethyl]difluorophenyl-(9CI)
MF C34 H33 F6 P3



L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(pentafluoroethyl)-, stereoisomer (9CI)
MF C10 F28 P2



L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, methylenebis- (9CI)
MF C H2 F4 P2

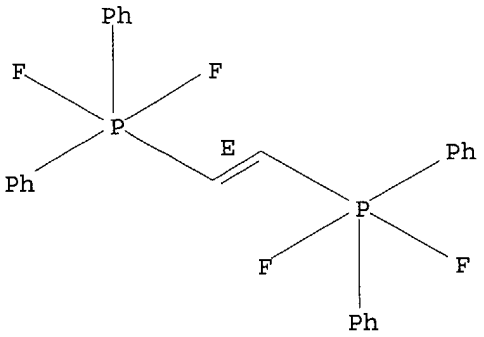


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, 1,2-ethenediylbis[difluorodiphenyl-, (E)- (9CI)
MF C26 H22 F4 P2

Double bond geometry as shown.

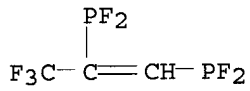


L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, (1,1-difluoro-1,2-ethanediyl)bis- (9CI)
MF C2 H2 F6 P2

$F_2P-CH_2-CF_2-PF_2$

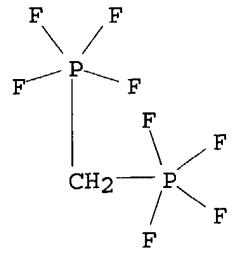
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, [1-(trifluoromethyl)-1,2-ethenediyl]bis- (9CI)
MF C3 H F7 P2

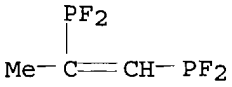


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, methylenebis[tetrafluoro- (9CI)
MF C H2 F8 P2

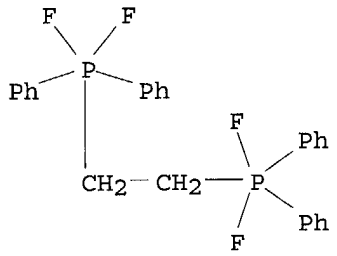


L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, (1-methyl-1,2-ethenediyl)bis- (9CI)
MF C3 H4 F4 P2



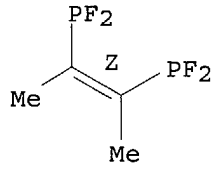
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphorane, 1,2-ethanediylbis[difluorodiphenyl- (9CI)
MF C26 H24 F4 P2



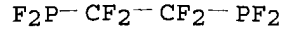
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, (1,2-dimethyl-1,2-ethenediyl)bis-, (Z)- (9CI)
MF C4 H6 F4 P2

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

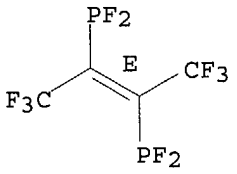
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis- (9CI)
MF C2 F8 P2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

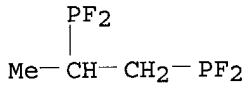
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, [1,2-bis(trifluoromethyl)-1,2-ethenediyl]bis-, (E)- (9CI)
MF C4 F10 P2

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

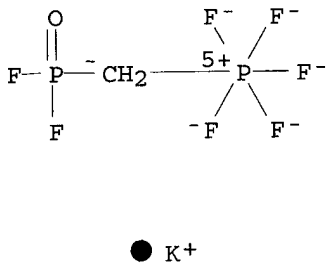
L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonous difluoride, (1-methyl-1,2-ethanediyl)bis- (9CI)
MF C3 H6 F4 P2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

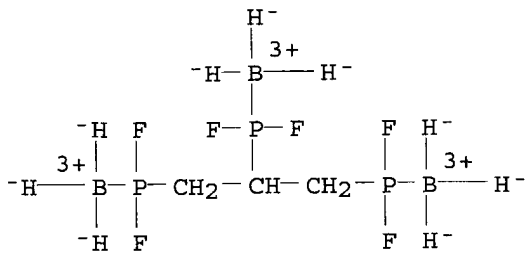
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphate(1-), [(difluorophosphinyl)methyl]pentafluoro-, potassium, (OC-6-21)- (9CI)
MF C H2 F7 O P2 . K
CI CCS

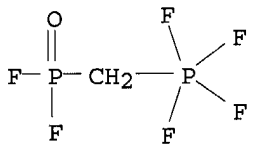


L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Boron, nonahydro[.mu.3-[1,2,3-propanetriyltris[phosphonous difluoride]-P:P':P'']]tri- (9CI)

MF C3 H14 B3 F6 P3
CI CCS



L4 60 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Phosphonic difluoride, [(tetrafluorophosphoranyl)methyl]- (9CI)
MF C H2 F6 O P2



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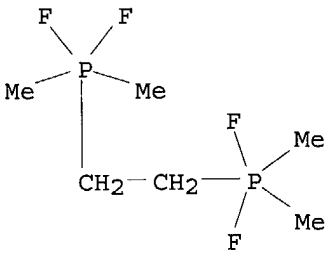
=> s l10
L11          34 L10

=> d hitstr 34

L11  ANSWER 34 OF 34  CAPLUS  COPYRIGHT 2003 ACS on STN
IT   1682-01-5, Phosphorane, ethylenebis[difluorodimethyl-
       (prepn. and properties of)
RN   1682-01-5  CAPLUS
CN   Phosphorane, ethylenebis[difluorodimethyl- (7CI, 8CI)  (CA INDEX NAME)
```

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=> d ibib abs hitstr 1-10

L11  ANSWER 1 OF 34  CAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2002:671919  CAPLUS
DOCUMENT NUMBER:          137:201439
TITLE:                    Electrochemical preparation of .alpha.,.omega.-
                          bis(fluoroalkyl/fluorophosphorano)alkane
INVENTOR(S):              Schmidt, Michael; Kuehner, Andreas; Ignatyev, Nikolai;
                          Sartori, Peter
PATENT ASSIGNEE(S):       Merck Patent G.m.b.H., Germany
SOURCE:                   Eur. Pat. Appl., 10 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     EP 1236734         A1   20020904       EP 2002-2734     20020207
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     DE 10109756        A1   20020905       DE 2001-10109756 20010228
     JP 2002255984      A2   20020911       JP 2001-297078   20010927
     BR 2002000520      A    20021001       BR 2002-520      20020225
     CN 1373133         A    20021009       CN 2002-105291   20020226
     US 2002121446      A1   20020905       US 2002-84681    20020228
PRIORITY APPLN. INFO.:                    DE 2001-10109756 A  20010228
OTHER SOURCE(S):          CASREACT 137:201439; MARPAT 137:201439
AB   The electrochem. prepn. of title compds. is described.  Thus, electrochem.
     fluorination of Et2PCH2CH2PEt2 with HF gave 23% (C2F5)2PF2CF2CF2F2P(C2F5)2
     along-with tris(pentafluoroethyl)difluorophosphorane.
IT   454421-26-2P 454468-19-0P
     RL: SPN (Synthetic preparation); PREP (Preparation)
       (prepn. of)
RN   454421-26-2  CAPLUS
CN   Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis[1,1,2,3,3
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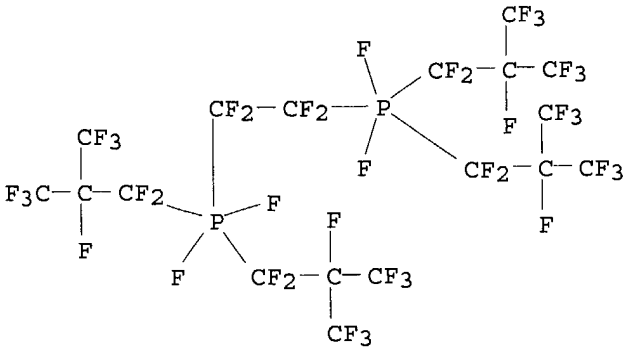
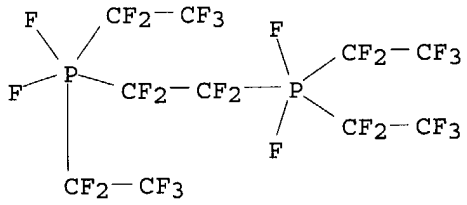
,3-hexafluoro-2-(trifluoromethyl)propyl]- (9CI) (CA INDEX NAME)



RN 454468-19-0 CAPLUS
CN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(pentafluoroethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:671916 CAPLUS
DOCUMENT NUMBER: 137:217076
TITLE: Preparation of fluoroalkylphosphate salts as electrolytes for primary and secondary batteries
INVENTOR(S): Schmidt, Michael; Kuehner, Andreas; Ignatyev, Nikolai; Satori, Peter
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany
SOURCE: Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1236732	A1	20020904	EP 2002-1914	20020131
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
DE 10109032	A1	20020905	DE 2001-10109032	20010224
JP 2003034692	A2	20030207	JP 2001-301156	20010928
TW 527740	B	20030411	TW 2001-90133110	20011231
CN 1371911	A	20021002	CN 2002-105228	20020221
BR 2002000465	A	20021029	BR 2002-465	20020221
US 2002122979	A1	20020905	US 2002-80515	20020225

PRIORITY APPLN. INFO.: DE 2001-10109032 A 20010224

OTHER SOURCE(S): CASREACT 137:217076; MARPAT 137:217076

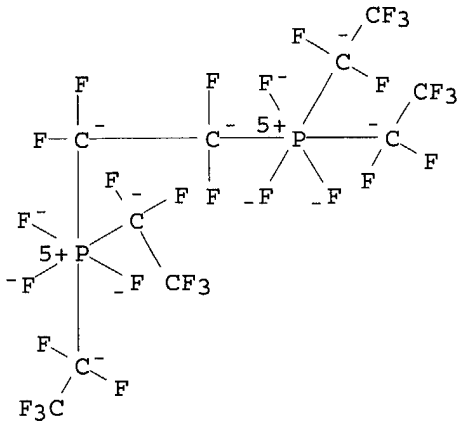
AB The prepn. of title compds., useful as electrolytes for primary and secondary batteries, is described. Thus, reaction of LiF with perfluoro-1,2-bis(diethyldifluorophosphorano)ethane in a mixt. of ethylene carbonate/dimethyl carbonate/diethyl carbonate (solvent mixt.) gave the title compd., 2Li+[(C2F5)2PF3(CF2)2PF3(C2F5)]2-, as a mixt. of stereoisomers. The oxidn. stability of the compd. prepd. is given.

IT **454458-13-0P**

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(oxidn. stability; prepn. of fluoroalkylphosphate salts as electrolytes for primary and secondary batteries)

RN 454458-13-0 CAPLUS

CN Phosphate(2-), hexafluorotetrakis(pentafluoroethyl)[.mu.-(1,1,2,2-tetrafluoro-1,2-ethanediyl)]di-, dilithium (9CI) (CA INDEX NAME)



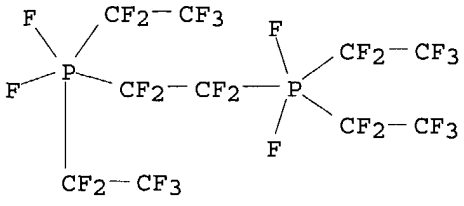
●2 Li+

IT **454468-19-0**

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with lithium fluoride)

RN 454468-19-0 CAPLUS

CN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(pentafluoroethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

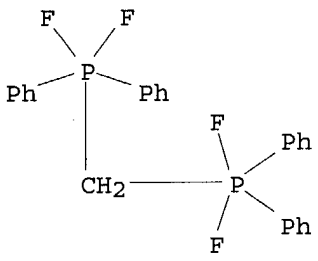
L11 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:670572 CAPLUS

DOCUMENT NUMBER: 136:6055
TITLE: Interaction of some methylenediphosphines with hexafluoroacetone and hexafluorothioacetone dimer
AUTHOR(S): Shevchenko, Igor V.; Mikolenko, Rostislav N.; Lork, Enno; Roschenthaler, Gerd-Volker
CORPORATE SOURCE: Institute of Bioorganic Chemistry, Kiev, 02094, Ukraine
SOURCE: European Journal of Inorganic Chemistry (2001), (9), 2377-2383
CODEN: EJICFO; ISSN: 1434-1948
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:6055

AB The reactions of methylenediphosphines with hexafluoroacetone (HFA) and hexafluorothioacetone dimer (HFTA) gave the resp. carbodiphosphoranes, e.g. (CF3)2CHOPPh2:C:PPh2OCH(CF3)2 (6), (CF3)2CHSP(NEt2)P:C:P(NEt2)2SCH(CF3)2 (15), and (CF3)2CHSPPh2:C:PPh2SCH(CF3)2 (19). The carbodiphosphoranes 6 and 19, with Ph groups at phosphorus, were able to react further with C:O or C:S functions. Compd. 6 added one equiv. of HFA across one of the ylidic P:C bonds to give compd. phosphoranylideneoxaphosphetane (9), a stable intermediate of the Wittig reaction. The addn. of HFTA to 19 gave, unexpectedly, the isomeric compd., (CF3)2CHSPPh2:C(PPh2)SCH(CF3)2 (21). The mol. structures of 9, 15, and 21 were confirmed by x-ray investigations.

IT **26040-41-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 26040-41-5 CAPLUS
CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

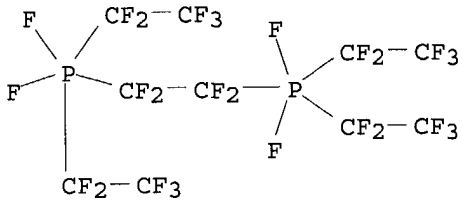
L11 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:200705 CAPLUS
DOCUMENT NUMBER: 133:4720
TITLE: Solution phase direct fluorination of bridged alkyl di- and triphosphines
AUTHOR(S): Kampa, J. J.; Nail, J. W.; Lagow, R. J.
CORPORATE SOURCE: Department of Chemistry and Material Science, University of Texas at Austin, Austin, TX, USA
SOURCE: Journal of Fluorine Chemistry (2000), 102(1-2), 333-335
CODEN: JFLCAR; ISSN: 0022-1139
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:4720

AB Perfluorinated phosphoranes with two P(V) centers, e.g., [Rf2PF2CF2]2 and

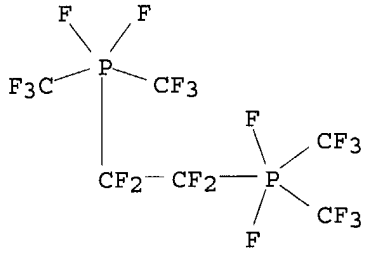
[CF3CF2PF2CF2CF2]2X (Rf = CF3, CF3CF2, X = CF2, O) were prepd. via elemental fluorination in soln. Oxidn. sensitive a,w-bis(dialkylphosphino)alkanes are converted into the corresponding difluorophosphoranes. The F-19 and P-31 NMR are discussed. Addnl. characterization is provided by high and low resoln. mass spectrometry.

IT **166982-31-6P 270921-56-7P 270921-57-8P 270921-59-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

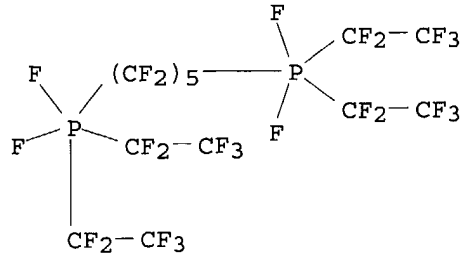
RN 166982-31-6 CAPLUS
CN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(pentafluoroethyl)-, stereoisomer (9CI) (CA INDEX NAME)



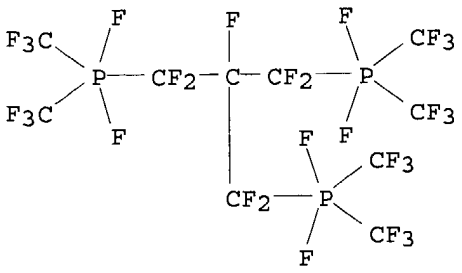
RN 270921-56-7 CAPLUS
CN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(trifluoromethyl)-, stereoisomer (9CI) (CA INDEX NAME)



RN 270921-57-8 CAPLUS
CN Phosphorane, (1,1,2,2,3,3,4,4,5,5-decafluoro-1,5-pentanediyl)bis[difluorobis(pentafluoroethyl)-, stereoisomer (9CI) (CA INDEX NAME)

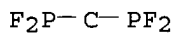


RN 270921-59-0 CAPLUS
CN Phosphorane, [2-[[difluorobis(trifluoromethyl)phosphoranyl]difluoromethyl]-1,1,2,3,3-pentafluoro-1,3-propanediyl]bis[difluorobis(trifluoromethyl)-, stereoisomer (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:76147 CAPLUS
DOCUMENT NUMBER: 132:194426
TITLE: On the electronic properties of substituted phosphinylcarbenes
AUTHOR(S): Schoeller, Wolfgang W.
CORPORATE SOURCE: Fak. Chem., Univ. Bielefeld, Bielefeld, D-33501, Germany
SOURCE: European Journal of Inorganic Chemistry (2000), (2), 369-374
CODEN: EJICFO; ISSN: 1434-1948
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A phosphinyl group exerts much less .pi.-conjugation properties than an amino group. On this basis, corresponding carbene structures exhibit much smaller singlet-triplet energy sepns. Of the various structures studied quantum-chem., the largest singlet-triplet energy sepns. are predicted for cyclic diphosphinylcarbenes, in which the two functional groups are incorporated into a ring system and the P atoms are substituted by phosphoraniminato groups. In this case, the singlet-triplet energy sepns. become essentially larger than for the Bertrand-type (push-pull) carbenes.
IT **260049-46-5**
RL: PRP (Properties)
(singlet-triplet sepn. energy, bond length, and bond angles of phosphinylcarbenes and related species by quantum.-chem. calcns.)
RN 260049-46-5 CAPLUS
CN Methylene, bis(difluorophosphino)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

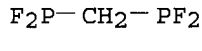
L11 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:30667 CAPLUS
DOCUMENT NUMBER: 124:261180
TITLE: New observations concerning the reactivity of triorganotin fluorides
AUTHOR(S): Lambertsen, Thomas; Schmutzler, Reinhard
CORPORATE SOURCE: Institut Anorganische Analytische Chemie, Technischen Universitaet, Braunschweig, D-38023, Germany
SOURCE: Zeitschrift fuer Naturforschung, B: Chemical Sciences (1995), 50(11), 1583-6

CODEN: ZNBSEN; ISSN: 0932-0776
PUBLISHER: Verlag der Zeitschrift fuer Naturforschung
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 124:261180

AB Me3SnF (I) reacted with many hydrolyzable chlorides to give Me3SnCl and the corresponding fluoride. The formation of PhPF2, (ClCH2)MeSiF2, F2PCH2PF2 and PF5 is described. The reaction of Ph3SnF or Bu3SnF with CaBr2 yielded pure triorganotin bromides. Compd. I acted either as a fluoride acceptor or, towards PF5, as a fluoride donor.

IT **60839-30-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(reactivity of triorganotin fluorides)

RN 60839-30-7 CAPLUS
CN Phosphonous difluoride, methylenebis- (9CI) (CA INDEX NAME)

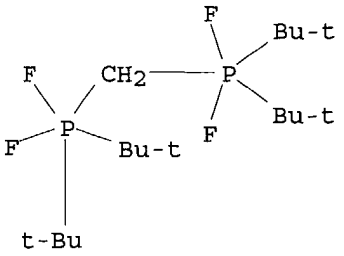


L11 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:822016 CAPLUS
DOCUMENT NUMBER: 124:56060
TITLE: Pentacoordinated molecules. 103. Synthesis and molecular structures of fluorophosphoranes, R3PF2, isoelectronic with anionic fluorosilicates
AUTHOR(S): Holmes, Robert R.; Holmes, Joan M.; Day, Roberta O.; Swamy, K. C. Kumara; Chandrasekhar, V.
CORPORATE SOURCE: Dep. of Chemistry, Univ. of Massachusetts, Amherst, MA, 01003-4510, USA
SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1995), 103(1-4), 153-69
CODEN: PSSLEC; ISSN: 1042-6507
PUBLISHER: Gordon & Breach
DOCUMENT TYPE: Journal
LANGUAGE: English

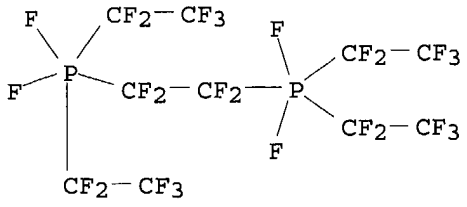
AB The new difluorophosphoranes Ph(o-Tol)2PF2 (1), Mes3PF2 (2), Ph(1-Np)2PF2 (3), (o-Tol)3PF2, (p-Tol)3F2, Ph(t-Bu)2PF2, and (Ph2PF2)2CH2 contg. bulky substituents were prepd. by the fluorination reaction of precursor organophosphines with dimethylaminosulfur trifluoride. They were characterized by 1H, 31P, and 19F NMR spectra. The mol. structures of 1-3 revealed trigonal bipyramidal geometries. Comparison of the structural data with that of isoelectronic anionic fluorosilicates along with the NMR data suggests the operation of a steric effect that increases bond lengths in the difluorophosphoranes 1-3 and in related anionic silicates. The data are discussed relative to enhanced reactivity obsd. for anionic silicates. 1 Crystallizes in the monoclinic space group C2/c with a 11.819(3), b 10.163(2), c 13.992(3) .ANG., .beta. 99.14(2).degree., and Z = 4. 2 Crystallizes in the monoclinic space group C2/c with a 10.531(2), b 12.667(2), c 18.110(4) .ANG., .beta. 104.21(2).degree., and Z = 4. 3 Crystd. in the monoclinic space group P21/c with a 15.868(2), b 7.434(1), c 18.213(4) .ANG., .beta. 112.34(2), and Z = 4. The final conventional unweighted residuals are 0.063 (1), 0.060 (2) and 0.040 (3).

IT **171857-49-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of difluorophosphoranes)

RN 171857-49-1 CAPLUS
CN Phosphorane, methylenebis[bis(1,1-dimethylethyl)difluoro-, stereoisomer (9CI) (CA INDEX NAME)



L11 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:653663 CAPLUS
DOCUMENT NUMBER: 123:144016
TITLE: The synthesis of tris(perfluoroalkyl)phosphanes
AUTHOR(S): Kampa, Joel J.; Nail, John W.; Lagow, Richard J.
CORPORATE SOURCE: Dep. Chemistry, Univ. Texas Austin, Austin, TX, 78712, USA
SOURCE: Angewandte Chemie, International Edition in English (1995), 34(11), 1241-44
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Trialkylphosphines have been subjected to direct elemental fluorination in Freon 11 and 113 (1:1) in a soln. reactor to produce difluorotris(perfluoroalkyl)phosphoranes, e.g., F2P(CF2CF3)3, in good yields. Redn. of the above difluorotris(perfluoroalkyl)phosphoranes by selective removal of the two axial fluorines atoms bound to the phosphorus using P(SiMe3)3 as reducing reagent gave previously inaccessible (perfluoroalkyl)phosphines, e.g., P(CF2CF3)3.
IT **166982-31-6P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of tris(perfluoroalkyl)phosphines from selective redn. of difluorotris(perfluoroalkyl)phosphoranes, prepd. by fluorination of trialkylphosphines)
RN 166982-31-6 CAPLUS
CN Phosphorane, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[difluorobis(pentafluoroethyl)-, stereoisomer (9CI) (CA INDEX NAME)



L11 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:571556 CAPLUS
DOCUMENT NUMBER: 117:171556
TITLE: Mono- and bis(difluorophosphoranyl)ethylene, n-hexylidenefluorophosphorane, and a 2,4-di-n-pentyl-.lambda.5,3.lambda.5-diphosphete
AUTHOR(S): Fluck, Ekkehard; Kuhm, Peter; Heckmann, Gernot
CORPORATE SOURCE: Gmelin-Inst. Anorg. Chem., Frankfurt/Main, Germany
SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie

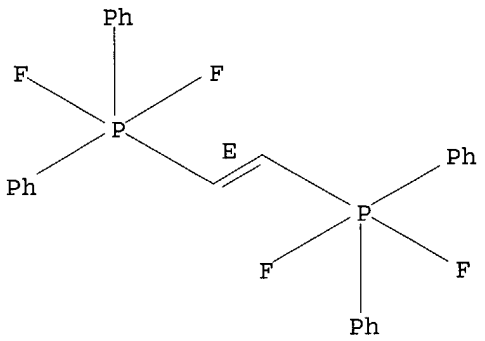
(1992), 613, 31-5
CODEN: ZAACAB; ISSN: 0044-2313
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 117:171556

AB Bis(diethylamino)phosphinylethylene, 1, is converted by SF4 into bis(diethylamino)difluorophosphoranylethylene, 2. Analogously trans-1,2-bis(diphenylphosphanyl)ethylene is converted into trans-1,2-bis(difluorodiphenylphosphoranyl)ethylene, 4. 2 Reacts with BuLi to give hexylidenebis(diethylamino)fluorophosphorane, 5. With more BuLi, the main product hexylidenebis(diethylamino)butylphosphorane, 7, and the byproduct 2,4-dipentyl-1,1,3,3-tetrakis(diethylamino)-1.lambda.5,3.lambda.5-diphosphate, 8, are formed. With tert-butyllithium, 2 yields 3,3-dimethylbutylidenebis(diethylamino)fluorophosphorane, 6. All new compds. 1, 2, 4-8 are characterized by their NMR and IR spectra.

IT **143674-49-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with BuLi)

RN 143674-49-1 CAPLUS
CN Phosphorane, 1,2-ethenediylbis[difluorodiphenyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L11 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:504761 CAPLUS
DOCUMENT NUMBER: 115:104761
TITLE: Carbonyl difluoride: reactions with metal-phosphine complexes
AUTHOR(S): Gupta, O. D.; Kirchmeier, Robert L.; Shreeve, Jean'ne M.
CORPORATE SOURCE: Dep. Chem., Univ. Idaho, Moscow, ID, 83843, USA
SOURCE: Journal of Fluorine Chemistry (1991), 52(1), 1-6
CODEN: JFLCAR; ISSN: 0022-1139
DOCUMENT TYPE: Journal
LANGUAGE: English

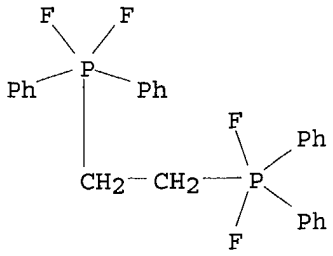
AB [NiLn]X2 [L = Ph2P(CH2)xPPh2; x = 1, 2, 3 (dpm, dpe, and dpp, resp.); X = Cl, Br, I; n = 1, 2] were allowed to react with COF2 under homogeneous and heterogeneous conditions at ambient temp. or above. The dpm ligands of [Ni(dpm)]X2 and [Ni(dpm)2]X2 were oxidatively fluorinated to the phosphorane, but [Ni(dpe)]X2 and [Ni(dpp)]X2 did not react with COF2 under any conditions tried. [Ni(dpe)2]X2 and [Ni(dpp)2]X2 reacted with COF2 at 25.degree. in CH2Cl2 to form fluorinated phosphoranes and [Ni(dpe)]X2 and [Ni(dpp)]X2, resp. COF2 reacted with [Ni(dpp)2] and [Ni(dpe)2] to give the stoichiometric amts. of oxidatively fluorinated phosphoranes.

IT **55339-52-1P 63883-61-4P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, from nickel bis(diphenylphosphino)alkane complexes and carbonyl difluoride)

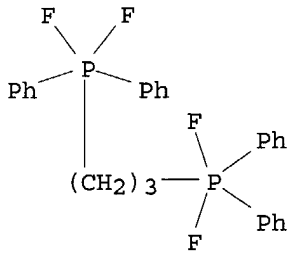
RN 55339-52-1 CAPLUS

CN Phosphorane, 1,2-ethanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)



RN 63883-61-4 CAPLUS

CN Phosphorane, 1,3-propanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)

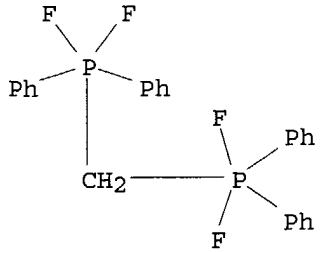


IT **26040-41-5P**

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from nickel bis(diphenylphosphino)methane complex halide salts and carbonyl fluoride)

RN 26040-41-5 CAPLUS

CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



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L11 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:90224 CAPLUS

DOCUMENT NUMBER: 112:90224

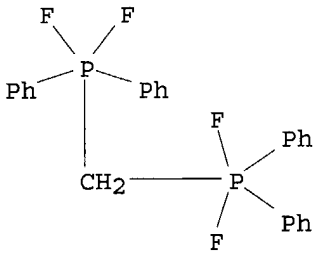
TITLE: Trifluoroamine oxide: reactions with phosphorus compounds and selected elements

AUTHOR(S): Gupta, O. D.; Kirchmeier, Robert L.; Shreeve, Jeanne M.
CORPORATE SOURCE: Dep. Chem., Univ. Idaho, Moscow, ID, 83843, USA
SOURCE: Inorganic Chemistry (1990), 29(3), 573-4
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English

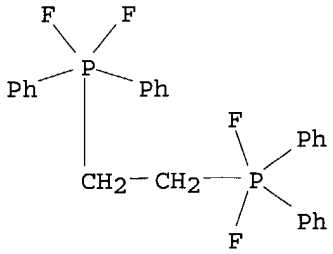
AB NF3O was reacted with main group elements and Zn, Cd and Pb at 200.degree. for 24 h to form their fluorides in high purity. Oxidative fluorination of phosphines and phosphites and abstraction of H from the P-H bond in secondary phosphates have been achieved at 110.degree.. Results are compared with COF2 and SOF2 as fluorinating agents.

IT **26040-41-5P 55339-52-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by fluorination with trifluoroamine oxide)

RN 26040-41-5 CAPLUS
CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



RN 55339-52-1 CAPLUS
CN Phosphorane, 1,2-ethanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)



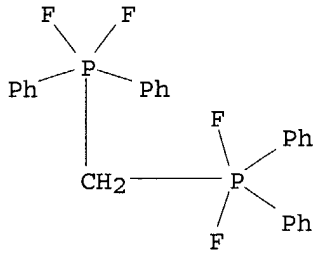
L11 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:35972 CAPLUS
DOCUMENT NUMBER: 112:35972
TITLE: Fluoro-substituted and other new carbodiphosphoranes
AUTHOR(S): Fluck, E.; Neumueller, B.; Braun, R.; Heckmann, G.; Simon, A.; Borrmann, H.
CORPORATE SOURCE: Gmelin-Inst. Anorg. Chem. Grenzgebiete, Max-Planck-Ges., Frankfurt/Main, D-6000/90, Fed. Rep. Ger.
SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (1988), 567, 23-38
CODEN: ZAACAB; ISSN: 0044-2313
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 112:35972

AB Reaction of phosphorus ylide, H2C:PF(NMe2)2, with Li in DME gave 7.1% (Me2N)3P:C:P(NMe2)2Me (I) along with [HC:P(NMe2)2]2 identified by 31P NMR. Dehydrofluorination of R2F2PCH2PF2R2 (R = NMe2, Ph) with BuLi gave title compds. R2FP:C:PFR2 (II). 31P NMR spectra of I and II were discussed in detail. The crystal structure of II (R = NMe2) was detd.

IT **26040-41-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydrofluorination of, with butyllithium, carbodiphosphorane by)

RN 26040-41-5 CAPLUS

CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



L11 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1989:497374 CAPLUS

DOCUMENT NUMBER: 111:97374

TITLE: Alkyl- and aryldifluorphosphorane

AUTHOR(S): Fluck, E.; Braun, R.

CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Stuttgart, Stuttgart, D-7000/80, Fed. Rep. Ger.

SOURCE: Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (1988), 18(7), 727-38
CODEN: SRIMCN; ISSN: 0094-5714

DOCUMENT TYPE: Journal

LANGUAGE: German

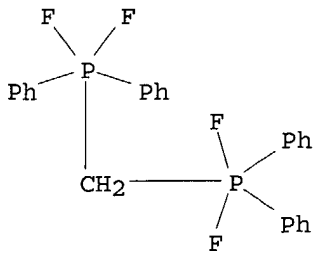
OTHER SOURCE(S): CASREACT 111:97374

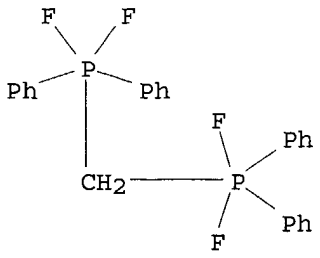
AB Methods of prepn. of alkyl and aryl difluorophosphoranes are reinvestigated. Routes starting from alkyl- and arylphosphines and using SF4 as fluorinating agent or starting from alkyl- and aryldibromophosphoranes and exchanging bromine for fluorine were used to prep. new members of the title compd. class. Thus, oxidative fluorination of (PhCH2)2PNEt2 with SF4 in Et2O gave 92.9% (PhCH2)2PF2NEt2; (Me3C)2PMeF2 was prepd. by bromination of (Me3C)2PMe with Br2 followed by fluorination with NaF.

IT **26040-41-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 26040-41-5 CAPLUS

CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)





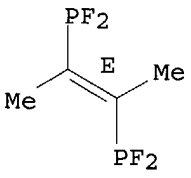
L11 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:114968 CAPLUS
DOCUMENT NUMBER: 110:114968
TITLE: Photoreactions of tetrafluorodiphosphine with alkynes
AUTHOR(S): Morse, J. G.; Mielcarek, J. J.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, 84322-0300, USA
SOURCE: Journal of Fluorine Chemistry (1988), 40(1), 41-9
CODEN: JFLCAR; ISSN: 0022-1139
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:114968

AB The reactions of tetrafluorodiphosphine with several alkynes in the gas phase and under UV irradn. were studied. Simple addn. products, e.g., CF3C(PF2):C(PF2)CF3 from CF3C.tplbond.CCF3, were obtained in substantial yield. Methyl-substituted alkynes gave little volatile product while ethyne and diphenylethyne gave no volatile addn. products. Nonvolatile byproducts were obtained, probably polymers, in substantial quantity in the latter instances. Volatile products were characterized by IR and NMR spectra and by mass spectrometry.

IT **119254-98-7P 119254-99-8P 119255-00-4P**
119255-01-5P 119255-02-6P 119280-18-1P
119280-19-2P 119280-20-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

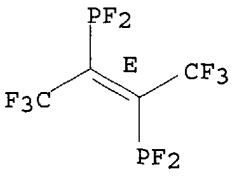
RN 119254-98-7 CAPLUS
CN Phosphonous difluoride, (1,2-dimethyl-1,2-ethenediyl)bis-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

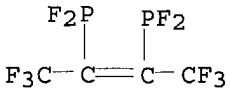


RN 119254-99-8 CAPLUS
CN Phosphonous difluoride, [1,2-bis(trifluoromethyl)-1,2-ethenediyl]bis-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

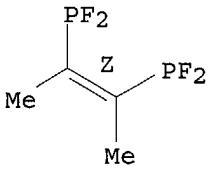


RN 119255-00-4 CAPLUS
CN Phosphonous difluoride, [1,2-bis(trifluoromethyl)-1,2-ethenediyl]bis- (9CI) (CA INDEX NAME)



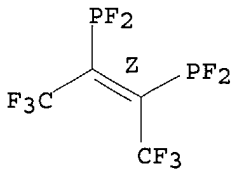
RN 119255-01-5 CAPLUS
CN Phosphonous difluoride, (1,2-dimethyl-1,2-ethenediyl)bis-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

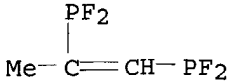


RN 119255-02-6 CAPLUS
CN Phosphonous difluoride, [1,2-bis(trifluoromethyl)-1,2-ethenediyl]bis-, (Z)- (9CI) (CA INDEX NAME)

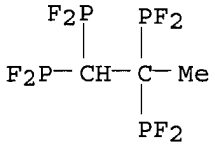
Double bond geometry as shown.



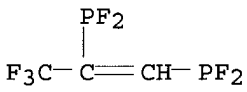
RN 119280-18-1 CAPLUS
CN Phosphonous difluoride, (1-methyl-1,2-ethenediyl)bis- (9CI) (CA INDEX NAME)



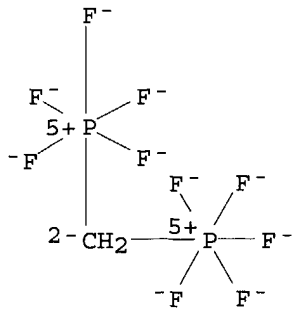
RN 119280-19-2 CAPLUS
CN Phosphonous difluoride, (1-methyl-1,2-ethanediylidene)tetrakis- (9CI) (CA INDEX NAME)



RN 119280-20-5 CAPLUS
CN Phosphonous difluoride, [1-(trifluoromethyl)-1,2-ethenediyl]bis- (9CI) (CA INDEX NAME)

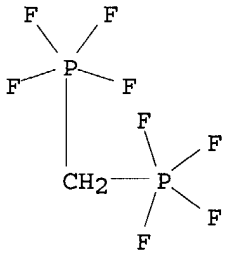


L11 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:631158 CAPLUS
DOCUMENT NUMBER: 109:231158
TITLE: Methylene compounds of nonmetals. V. Methylenediphosphorus halides
AUTHOR(S): Fild, M.; Handke, W.
CORPORATE SOURCE: Inst. Anorg. Anal. Chem., Tech. Univ. Braunschweig, Braunschweig, D-3300, Fed. Rep. Ger.
SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (1987), 555, 109-17
CODEN: ZAACAB; ISSN: 0044-2313
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 109:231158
AB The synthesis of methylene-bridged diphosphorus halides X2P(Z)CH2PX2, X2P(Z)CH2P(Z)X2 and F4PCH2P(Z)X2 (X = F, Cl; Z = O, S) as well as the prepn. of the fluorophosphorane F4PCH2PF4, and of the two anions, [F5PCH2PF5]2- and [F5PCH2P(O)F2]-, is reported.
IT **117618-21-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)
RN 117618-21-0 CAPLUS
CN Phosphate(2-), decafluoro-.mu.-methylenedi-, dipotassium (9CI) (CA INDEX NAME)



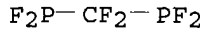
●2 K+

IT **57080-69-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with antimony fluoride)
RN 57080-69-0 CAPLUS
CN Phosphorane, methylenebis[tetrafluoro- (9CI) (CA INDEX NAME)

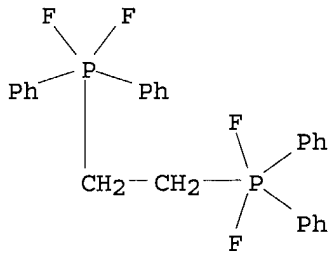


L11 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:37961 CAPLUS
DOCUMENT NUMBER: 108:37961
TITLE: Preparation and reactions of difluoromethanebis(phosphonous acid dichlorides)
AUTHOR(S): Fild, Manfred; Reichert, Karl Heinz
CORPORATE SOURCE: Inst. Anorg. Anal. Chem., Tech. Univ. Braunschweig, Braunschweig, D-3300, Fed. Rep. Ger.
SOURCE: Chemiker-Zeitung (1987), 111(5), 176-7
CODEN: CMKZAT; ISSN: 0009-2894
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 108:37961
AB Dethiolation of Cl2P(S)CF2P(S)Cl2 with PhPCl2 gave 82% Cl2PCF2PCl2 (I). Reaction of I with Me2CHOH in presence of Et3N gave 80% (Me2CHO)2PCF2P(OCHMe2)2 (II). Aminolysis of I with Me3SiNMe2 gave 90% (Me2N)2PCF2P(NMe2)2 (III). Fluorination of I with SbF3 gave 63% F2PCF2PF2. Cyclization of I with Me3CNH2 in CH2Cl2 gave 50% 1-tert-butyl-2,4-dichloro-3,3-difluoro-1-aza-2,4-diphosphacyclobutane. Complexation of II or III with norbornadienylmolybdenum tetracarbonyl gave 55% [(Me2CHO)2PCF2P(OCHMe2)2]Mo(CO)4 and 60% [(Me2N)2PCF2P(NMe2)2]Mo(CO)4.
IT **112275-99-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 112275-99-7 CAPLUS
CN Phosphonous difluoride, (difluoromethylene)bis- (9CI) (CA INDEX NAME)



L11 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1984:472840 CAPLUS
DOCUMENT NUMBER: 101:72840
TITLE: Carbonyl difluoride: a versatile fluorinating reagent
AUTHOR(S): Gupta, O. D.; Shreeve, Jeanne M.
CORPORATE SOURCE: Dep. Chem., Univ. Idaho, Moscow, ID, 83843, USA
SOURCE: Journal of the Chemical Society, Chemical Communications (1984), (7), 416-17
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 101:72840
AB COF2 (I) oxidatively fluorinated organophosphorus compds. in CH2Cl2 at 25.degree. where the central atom is coordinatively unsatd. and replaced P-H, N-H or C-H bonds with P-F, N-F or C-F bonds, resp. E.g., I with R3P (R = Me, Bu, Me3C, Ph) in CH2Cl2 at 25.degree. for 12 h gave R3PF2 (same R) in 70-80% yield.
IT **55339-52-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 55339-52-1 CAPLUS
CN Phosphorane, 1,2-ethanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)



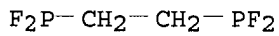
L11 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1984:447617 CAPLUS
DOCUMENT NUMBER: 101:47617
TITLE: Ligand influence on the electronic properties of some bis(tertiary phosphine)-substituted chromium and molybdenum carbonyls: cyclic voltammetry and infrared spectroscopy of M(CO)4R2PCH2CH2PR2
AUTHOR(S): Cook, Ron L.; Morse, Joseph G.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, 84322, USA
SOURCE: Inorganic Chemistry (1984), 23(15), 2332-6
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB R2PCH2CH2PR2 (R = F, Cl, C6F5, MeO, Ph, Me and cyclohexyl) and their resp. Cr and Mo complexes were prepd. to provide a wide range of electronic effects at the metal center. Cyclic voltammetry and IR spectroscopy were used to det. relative charge d. at the metal center. As detd. by cyclic

voltammetry the .pi.-acceptor strength of R2PCH2CH2PR2 decreases in the order R = F > Cl > C6F5 > MeO > Ph > Me > cyclohexyl. A linear correlation between k(CO)trans and the value E1/2 = (Ea + Ec)/2 was found for the series M(CO)6 and M(CO)4R2PCH2CH2PR2 (M = Cr or Mo and R = F, Cl, C6F5, MeO, and Ph). The complexes contg. Me2PCH2CH2PMe2 and R2PCH2CH2PR2 (R = cyclohexyl) do not fall on this line but lie below it. The existence of these 2 groups of phosphines is argued to reflect the difference in the .pi.-acceptor capabilities of the ligands.

IT **50966-32-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from bis(dichlorophosphino)ethane and potassium fluoride)

RN 50966-32-0 CAPLUS

CN Phosphonous difluoride, 1,2-ethanediylbis- (9CI) (CA INDEX NAME)



L11 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1981:425216 CAPLUS

DOCUMENT NUMBER: 95:25216

TITLE: Chemistry of phosphorus fluorides. 43. Synthesis and nuclear magnetic resonance spectroscopic studies of alkylene/alkylidenebis(phosphonic acid dihalides) and -bis(fluorophosphoranes)

AUTHOR(S): Althoff, Wolfgang; Fild, Manfred; Schmutzler, Reinhard

CORPORATE SOURCE: Tech. Univ. Braunschweig, Braunschweig, D-3300, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1981), 114(3), 1082-90
CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

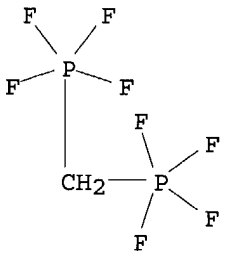
LANGUAGE: German

AB Cl-F exchange in X[P(O)Cl2]2 with AsF3 gave X[P(O)F2]2 (I). Reaction of I with SF4 gave X[PF4]2 (X = CH2 (II), CH2CH2, trans-CH:CH). Addnl. methods of synthesis were indicated for II which were based on the cleavage of the Si-C bond with PF5 in the Si-C bonded precursors, 1,1,3,3-tetramethyl-1,3-disilacyclobutane and Me3SiCH2PF4.

IT **57080-69-0P 78102-40-6P 78102-41-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

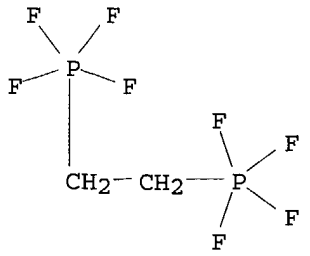
RN 57080-69-0 CAPLUS

CN Phosphorane, methylenebis[tetrafluoro- (9CI) (CA INDEX NAME)



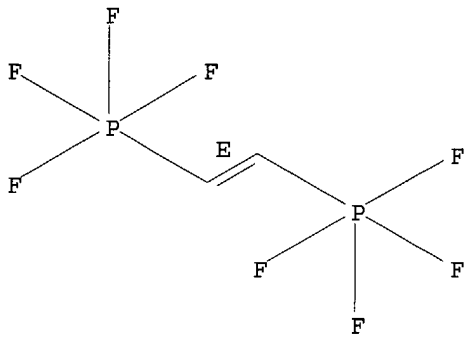
RN 78102-40-6 CAPLUS

CN Phosphorane, 1,2-ethanediylbis[tetrafluoro- (9CI) (CA INDEX NAME)

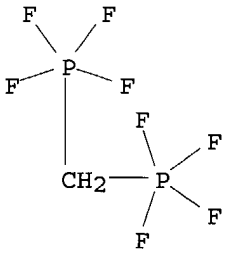


RN 78102-41-7 CAPLUS
CN Phosphorane, 1,2-ethenediylbis[tetrafluoro-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L11 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1979:38988 CAPLUS
DOCUMENT NUMBER: 90:38988
TITLE: A novel diphosphorus zwitterion
AUTHOR(S): Cowley, Alan H.; Lee, Rosalind Chung-Yi
CORPORATE SOURCE: Dep. Chem., Univ. Texas, Austin, TX, USA
SOURCE: Inorganic Chemistry (1979), 18(1), 60-3
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel acyclic diphosphorus zwitterion F5P-CH2P+(NMe2)2F (I) contg. both hexa- and tetracoordinate P atoms was synthesized by reaction of Me3SiNMe2 with (F4P)2CH2. The 1H and 19F resonances of I collapse at higher temps. Possible causes for these spectral changes are discussed. Some unsuccessful attempts to synthesize new (F4P)2X compds. (Z = NMe, O, S) are described.
IT **57080-69-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (dimethylamino)trimethylsilane)
RN 57080-69-0 CAPLUS
CN Phosphorane, methylenebis[tetrafluoro- (9CI) (CA INDEX NAME)



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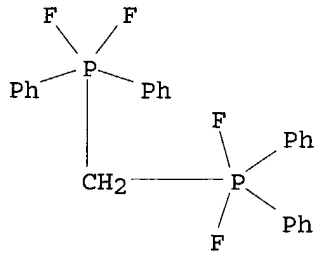
L11 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1979:15633 CAPLUS
DOCUMENT NUMBER: 90:15633
TITLE: Coordination chemistry of bidentate difluorophosphines. IV. Complexes of 1,2-bis(difluorophosphino)ethane with nickel(0) and molybdenum(0)
AUTHOR(S): Gallup, Darrell L.; Morse, Joseph G.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, USA
SOURCE: Journal of Organometallic Chemistry (1978), 159(4), 477-82
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ligand, 1,2-bis(difluorophosphino)ethane reacts with Ni(CO)4 in the gas phase and in soln. to produce CO and a polymer, [Ni(PF2C2H4PF2)2]x. PF2C2H4PF2 displaces norbornadiene from (C7H8)Mo(CO)4 to yield the relatively air-stable complex, Mo(CO)4(PF2C2H4PF2). Anal. of the IR spectrum of the monomeric complex indicates that the ligand exhibits .pi.-acceptor strength equal to that of 1,2-bis(difluorophosphino)cyclohexane.
IT **50966-32-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(.pi.-acceptor strength of)
RN 50966-32-0 CAPLUS
CN Phosphonous difluoride, 1,2-ethanediylbis- (9CI) (CA INDEX NAME)

$F_2P-CH_2-CH_2-PF_2$

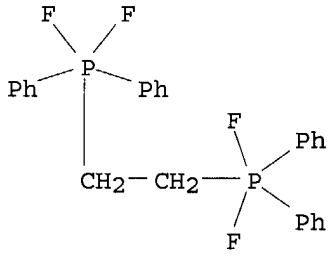
L11 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1977:584607 CAPLUS
DOCUMENT NUMBER: 87:184607
TITLE: Oligo(difluorophosphoranes) by direct fluorination of tertiary phosphines
AUTHOR(S): Ruppert, Ingo; Bastian, Volker
CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Bonn, Bonn, Fed. Rep. Ger.
SOURCE: Angewandte Chemie (1977), 89(10), 763-5
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German
AB Fluorination of Ph2P(CH2)nPPh2 in CFCl3 gave 71-89% Ph2PF2(CH2)nPF2Ph2 (n = 1-4) similarly, Ph2PF2(CH2)2PF2Me2, (CH2)3(PF2Me2)2, PhPF2(CH2CH2PF2Ph2)2, and Ph2PF2CH2CH2PF2(CH2CH2PF2Ph2)2 were prepd.
IT **26040-41-5P 55339-52-1P 55339-53-2P**

63883-57-8P 63883-58-9P 63883-59-0P
63883-60-3P 63883-61-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

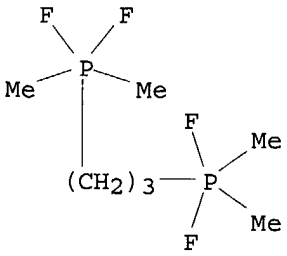
RN 26040-41-5 CAPLUS
CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



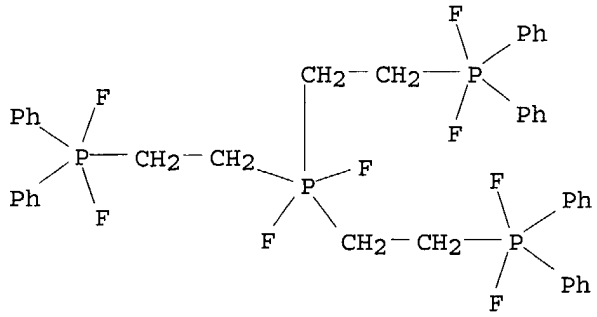
RN 55339-52-1 CAPLUS
CN Phosphorane, 1,2-ethanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)



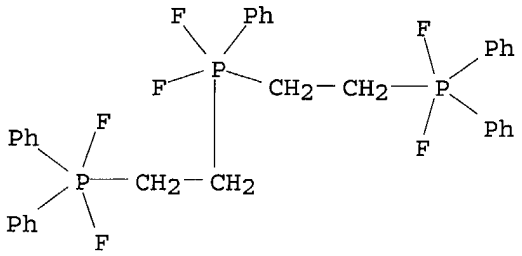
RN 55339-53-2 CAPLUS
CN Phosphorane, 1,3-propanediylbis[difluorodimethyl- (9CI) (CA INDEX NAME)



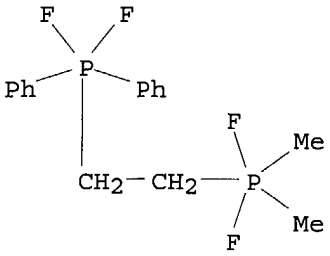
RN 63883-57-8 CAPLUS
CN Phosphorane, tris[2-(difluorodiphenylphosphoranyl)ethyl]difluoro- (9CI) (CA INDEX NAME)



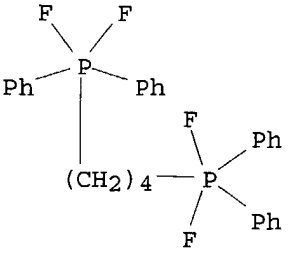
RN 63883-58-9 CAPLUS
CN Phosphorane, bis[2-(difluorodiphenylphosphoranyl)ethyl]difluorophenyl- (9CI) (CA INDEX NAME)



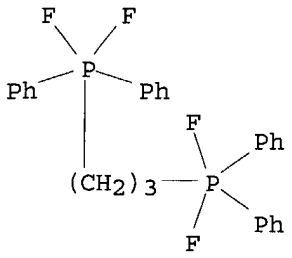
RN 63883-59-0 CAPLUS
CN Phosphorane, [2-(difluorodimethylphosphoranyl)ethyl]difluorodiphenyl- (9CI) (CA INDEX NAME)



RN 63883-60-3 CAPLUS
CN Phosphorane, 1,4-butanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)



RN 63883-61-4 CAPLUS
CN Phosphorane, 1,3-propanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)

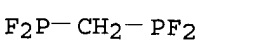


L11 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1977:584598 CAPLUS
DOCUMENT NUMBER: 87:184598
TITLE: Preparation of diphosphorus(III) compounds with methylene bridges
AUTHOR(S): Fild, Manfred; Heinze, Jutta; Krueger, Wieland
CORPORATE SOURCE: Tech. Univ. Braunschweig, Braunschweig, Fed. Rep. Ger.
SOURCE: Chemiker-Zeitung (1977), 101(5), 259-60
CODEN: CMKZAT; ISSN: 0009-2894
DOCUMENT TYPE: Journal
LANGUAGE: German
AB CH2(PCl2)2, prepd. in 65% yield from CH2(PSCl2)2 and Ph2PCl, was treated with MeOH, Et2NH, MeLi, and SbF3 to give, resp., CH2[P(OMe)2]2, CH2[P(NEt2)2]2, CH2(PMe2)2, and CH2(PF2)2.
IT **60839-30-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 60839-30-7 CAPLUS
CN Phosphonous difluoride, methylenebis- (9CI) (CA INDEX NAME)

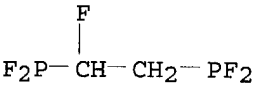
$F_2P-CH_2-PF_2$

L11 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1976:560263 CAPLUS
DOCUMENT NUMBER: 85:160263
TITLE: The synthesis and characterization of some new difluorophosphine derivatives
AUTHOR(S): Bockerman, G. N.; Parry, R. W.
CORPORATE SOURCE: Dep. Chem., Univ. Michigan, Ann Arbor, MI, USA
SOURCE: Inorg. Nucl. Chem. - Herbert H. Hyman Mem. Vol. (1976), 55-8. Editor(s): Katz, Joseph J.; Sheft, Irving. Pergamon: Oxford, Engl.
CODEN: 33TZAU
DOCUMENT TYPE: Conference
LANGUAGE: English
AB F2PCH2PF2 was prepd. in 32% yield by the photolytic decompn. of F2PCH2I (prepd. by the metathesis between F2PI and ICH2HgI) in the presence of Hg. F2PCH2CH:CH2 was prepd. in 49% yield by the reaction of CH2:CHCH2I with F2PI.
IT **60839-30-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 60839-30-7 CAPLUS

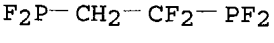
CN Phosphonous difluoride, methylenebis- (9CI) (CA INDEX NAME)



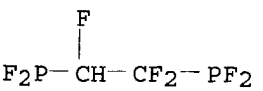
L11 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1976:121956 CAPLUS
DOCUMENT NUMBER: 84:121956
TITLE: Photoreactions of tetrafluorodiphosphine with partially fluorinated ethenes
AUTHOR(S): Glanville, W. Kent; Morse, Karen W.; Morse, Joseph G.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, USA
SOURCE: Journal of Fluorine Chemistry (1976), 7(1-3), 153-8
CODEN: JFLCAR; ISSN: 0022-1139
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The photoreactions of P2F4 with partially fluorinated ethenes gave 1,2-bis(difluorophosphino)-1-fluoroethane, 1,2-bis(difluorophosphino)-1,1-difluoroethane, and 1,2-bis(difluorophosphino)-1,1,2-trifluoroethane. A rapidly diminishing yield of product results with increasing fluorination of the olefin.
IT **59239-79-1 59239-80-4 59239-81-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(sepn. and NMR of)
RN 59239-79-1 CAPLUS
CN Phosphonous difluoride, (1-fluoro-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



RN 59239-80-4 CAPLUS
CN Phosphonous difluoride, (1,1-difluoro-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



RN 59239-81-5 CAPLUS
CN Phosphonous difluoride, (1,1,2-trifluoro-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L11 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1975:497486 CAPLUS
DOCUMENT NUMBER: 83:97486
TITLE: Cleavage of the silicon-carbon bond by a phosphorus fluoride. Methylenebis(tetrafluorophosphorane)

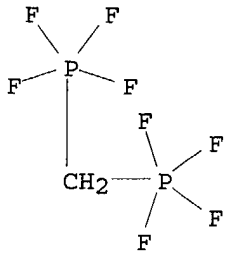
AUTHOR(S): Althoff, Wolfgang; Fild, Manfred; Koop, Hermann; Schmutzler, Reinhard
CORPORATE SOURCE: Tech. Univ., Braunschweig, Fed. Rep. Ger.
SOURCE: Journal of the Chemical Society, Chemical Communications (1975), (12), 468-9
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English

AB PF5 cleavage of 1,1,3,3-tetramethyl-1,3-disilacyclobutane gave CH2(PF4)2 (I) and (FSiMe2CH2)2. 19F and 31P NMR spectroscopy showed that I underwent fast positional exchange of ligands at P from -100 to 30.degree..

IT **57080-69-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 57080-69-0 CAPLUS

CN Phosphorane, methylenebis[tetrafluoro- (9CI) (CA INDEX NAME)



L11 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN

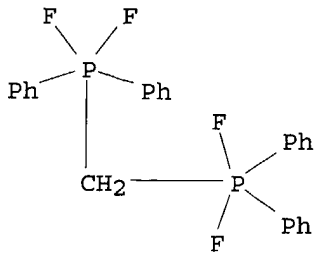
ACCESSION NUMBER: 1975:458939 CAPLUS
DOCUMENT NUMBER: 83:58939
TITLE: Alkylenebis(difluorophosphoranes) by hydrofluorination of silylated phosphorus(V) imides
AUTHOR(S): Appel, Rolf; Ruppert, Ingo
CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Bonn, Bonn, Fed. Rep. Ger.
SOURCE: Chemische Berichte (1975), 108(3), 919-24
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: German

AB (CH2)n(PF2R2)2 (R, n given: Ph, 1; Ph, 2; Me, 3) were prepd. by cleavage and fluorination of R2P(:NSiMe3)(CH2)nPR2(:NSiMe3) with HF in ether.

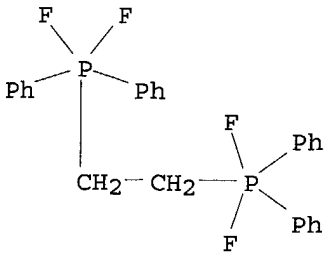
IT **26040-41-5P 55339-52-1P 55339-53-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 26040-41-5 CAPLUS

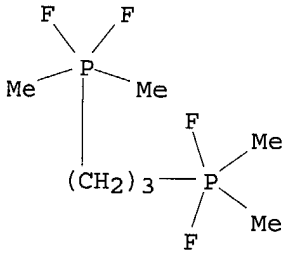
CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



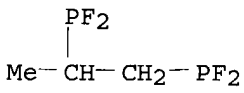
RN 55339-52-1 CAPLUS
CN Phosphorane, 1,2-ethanediylbis[difluorodiphenyl- (9CI) (CA INDEX NAME)

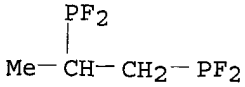


RN 55339-53-2 CAPLUS
CN Phosphorane, 1,3-propanediylbis[difluorodimethyl- (9CI) (CA INDEX NAME)

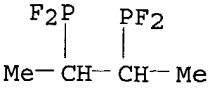


L11 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1975:105840 CAPLUS
DOCUMENT NUMBER: 82:105840
TITLE: Photoreactions of tetrafluorodiphosphine with nonsubstituted olefins and perfluoroolefins
AUTHOR(S): Morse, Joseph G.; Morse, Karen W.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, USA
SOURCE: Inorganic Chemistry (1975), 14(3), 565-9
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The photoreactions of P2F4 with C2H4, C3H6, 2-C4H8, C6H10, C2F4, and C3F6 have resulted in the formation of F2PCH2CH2PF2, CH3CHPF2CH2PF2, CH3CHPF2CHPF2CH3, C6H10(PF2)2, F2PCF2CF2PF2, and CF3CFPF2CF2PF2. No recoverable amt. of comparable products was obtained in similar mixts. of P2F4 and 2-C4F8 or of P2F4 and C6F10. The new compds. were characterized by ir, NMR, and mass spectrometry. C6H10(PF2)2 displays temp.-dependent NMR spectra consistent with the trans isomer.
IT **53432-50-1P 53432-51-2P 53432-53-4P**
53432-54-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 53432-50-1 CAPLUS
CN Phosphonous difluoride, (1-methyl-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

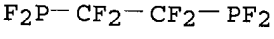




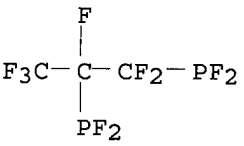
RN 53432-51-2 CAPLUS
CN Phosphonous difluoride, (1,2-dimethyl-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



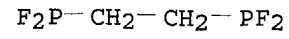
RN 53432-53-4 CAPLUS
CN Phosphonous difluoride, (1,1,2,2-tetrafluoro-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



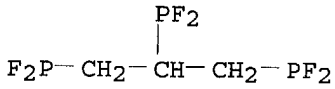
RN 53432-54-5 CAPLUS
CN Phosphonous difluoride, [1,1,2-trifluoro-2-(trifluoromethyl)-1,2-ethanediyl]bis- (9CI) (CA INDEX NAME)



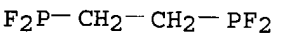
L11 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1975:43523 CAPLUS
DOCUMENT NUMBER: 82:43523
TITLE: Chemistry of 1,2-bis(difluorophosphino)ethane. Preparation of 2,5-difluoro-1-methyl-1,2,5-azadiphospholidine and 1-dimethylaminofluorophosphino-2-difluorophosphinoethane
AUTHOR(S): Falardeau, E. R.; Morse, K. W.; Morse, J. G.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, USA
SOURCE: Inorganic Chemistry (1975), 14(1), 132-4
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The gas-phase reaction of methylamine with F2PCH2CH2PF2 by ring closure gave 2,5-difluoro-1-methyl-1,2,5-azadiphosphilidine, (I). Under similar conditions, ammonia apparently gave ring closure also but in much lower yield and with lower stability. Dimethylamine gave Me2NPFCH2CH2PF2.
IT **50966-32-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with ammonia and methanamines)
RN 50966-32-0 CAPLUS
CN Phosphonous difluoride, 1,2-ethanediylbis- (9CI) (CA INDEX NAME)



L11 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1974:536232 CAPLUS
DOCUMENT NUMBER: 81:136232
TITLE: Reactions of tetrafluorodiphosphine with some 3-substituted propene derivatives
AUTHOR(S): Falardeau, E. R.; Morse, K. W.; Morse, J. G.
CORPORATE SOURCE: Dep. Chem. Biochem., Utah State Univ., Logan, UT, USA
SOURCE: Inorganic Chemistry (1974), 13(10), 2333-7
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The reaction of P2F4 with F2PCH2CH: CH2 and H2NCH2CH: CH2 gave F2PCH2CHPF2CH2PF2 and F2PNHCH2CH: CH2, resp. Me2NCH2CH: CH2 reacts in the dark with P2F4 to give unidentified solid products. The formation of F2PCH2CHPF2CH2PF2 proceeds by a free-radical path and its tribasic character demonstrated by the formation of a triadduct with B2H6. The relative Lewis basicities of the two kinds of P in F2PCH2CHPF2CH2PF2 was investigated by NMR of a 1:1 mixt. of B2H6 and F2PCH2CHPF2CH2PF2.
IT **52124-34-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 52124-34-2 CAPLUS
CN Phosphonous difluoride, 1,2,3-propanetriyltris- (9CI) (CA INDEX NAME)



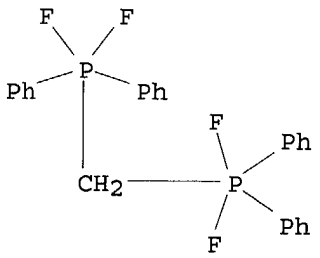
L11 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1974:15017 CAPLUS
DOCUMENT NUMBER: 80:15017
TITLE: Free radical reactions of tetrafluorodiphosphine. Preparation of 1,2-bis(difluorophosphino)ethane
AUTHOR(S): Morse, Karen W.; Morse, Joseph G.
CORPORATE SOURCE: Dep. Chem., Utah State Univ., Logan, UT, USA
SOURCE: Journal of the American Chemical Society (1973), 95(25), 8469-70
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
AB F2PCH2CH2PF2 was prepd. by gas-phase photolysis or thermolysis at 300.degree. of P2F4 and CH2:CH2. The structure was confirmed by spectral data, as was the structure of the 1:1 adduct with diborane.
IT **50966-32-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and spectral characteristics of)
RN 50966-32-0 CAPLUS
CN Phosphonous difluoride, 1,2-ethanediylbis- (9CI) (CA INDEX NAME)



L11 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1970:7180 CAPLUS
DOCUMENT NUMBER: 72:7180
TITLE: Mass spectroscopic studies of phosphorus-fluorine compounds. Compounds containing five-coordinate phosphorus
AUTHOR(S): Blazer, T. A.; Schmutzler, R.; Gregor, I. K.
CORPORATE SOURCE: Repauno Develop. Lab., E. I. du Pont de Nemours and Co., Inc., Gibbstown, NJ, USA
SOURCE: Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie, Biochemie, Biophysik, Biologie (1969), 24(9), 1081-8
CODEN: ZENBAX; ISSN: 0044-3174
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The mass spectra (m/e) of 24 compds. are tabulated, along with the probable ion assignments and their relative abundances. There are 7 tetrafluorophosphoranes: FPF4 (= PF5), MePF4, EtPF4, Ph-PF4, Me2NPF4, Et2NPF4, Ph2NPF4; 9 trifluorophosphoranes: Me2PF3, Ph2PH3, EtPF3NMe2, EtPF3NEt2, EtPF3Q, (Q = pyrrol-1-yl), PhPF3NEt2, PhPF3Q PF3[NMe2]2, PF3[NEt2]2; 8 difluorophosphoranes: Me3PF2, Bu3PF2, Me2PhPF2, MePh2PF2, [Ph2PF2]2CH2, Ph3PF2, Me2PF2NMe2, Ph2PF2NMe2.
Methylenebis[diphenyldifluorophosphorane], newly reported, was prepd. from methylenebis[diphenylphosphine] and SF4 in benzene, the excess SF4 vented and NaF added, then pptd. and crystd. The compd. was characterized by elemental anal., and by N.M.R. and ir spectroscopy.

IT **26040-41-5**
RL: PRP (Properties)
(mass spectrum of)
RN 26040-41-5 CAPLUS
CN Phosphorane, methylenebis[difluorodiphenyl-, stereoisomer (9CI) (CA INDEX NAME)



L11 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1966:104419 CAPLUS
DOCUMENT NUMBER: 64:104419
ORIGINAL REFERENCE NO.: 64:19678f-h
TITLE: Fluorophosphoranes
INVENTOR(S): Schmutzler, Reinhard
PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.
SOURCE: 6 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3246032		19660412	US	19630121

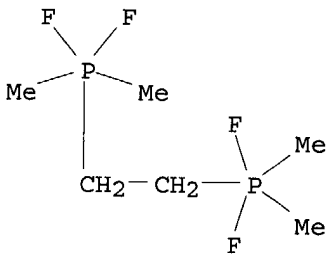
GI For diagram(s), see printed CA Issue.

AB The title compds., useful as polymerization catalysts and as additives with fire retardant and surface modifying properties, were prepd. from the resp. phosphine sulfides. E.g., a mixt. of 37.2 parts tetramethyldiphosphine disulfide (I) and 70 parts SbF3 was ground in a N atm., placed in a 100 ml. 2-necked flask, and gently heated under N to yield 38.6 parts (82%) of dimethyltrifluorophosphorane, b. 62.degree.. I was prepd. by treating PSCl3 with the appropriate Grignard reagent. Similarly prepd. were dibutyltrifluorophosphorane, b10 71.degree.; tetrabutyldiphosphine disulfide, m. 73-6.degree.; phenylmethyltrifluorophosphorane, b9 64.degree., n26.5D 1.4646; tributyldifluorophosphorane, b0.4 71-2.degree., n20D 1.4346, and n26.5D 1.4318; tributylphosphine sulfide, b0.5 129-30.degree., n25D 1.5011; P,P,P',P'-tetramethylethylenebis(difluorophosphorane), m. 47.1-8.4.degree.; bis(cyclotetramethylene)diphosphine disulfide (II), m. 185.degree.; bis(cyclopentamethylene)diphosphine disulfide, softening at 185.degree. and completely melted at 225.degree.; cyclotetramethylene-trifluorophosphorane, b90 61-2.degree.; cyclopentamethylenetrifluorophosphorane, b40 64-5.degree.; phenyldibutylphosphine sulfide, m. 50.5-1.5.degree.; phenyldibutyldifluorophosphorane, b0.3 89.degree., b0.08 80.degree., and n24.4D 1.5010; III, b5 100-20.degree., IV (R = S), m. 69-70.degree.; IV (R = F2), b5 100-20.degree..

IT **1682-01-5**, Phosphorane, ethylenebis[difluorodimethyl- (prepn. of)

RN 1682-01-5 CAPLUS

CN Phosphorane, ethylenebis[difluorodimethyl- (7CI, 8CI) (CA INDEX NAME)



L11 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1964:50599 CAPLUS

DOCUMENT NUMBER: 60:50599

ORIGINAL REFERENCE NO.: 60:8878h,8879a

TITLE: Molecular asymmetry in the coordination of olefins to transition metals

AUTHOR(S): Pajaro, G.; Corradini, P.; Palumbo, R.; Panunzi, A.

CORPORATE SOURCE: Univ. Naples

SOURCE: Makromolekulare Chemie (1964), 71, 184-8
CODEN: MACEAK; ISSN: 0025-116X

DOCUMENT TYPE: Journal

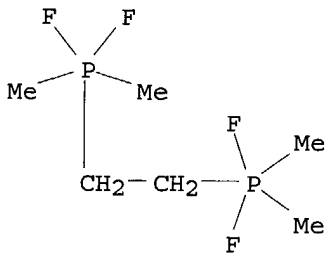
LANGUAGE: English

AB Evidence is given for a complex trans-[PtCl2[(-)(S)-.alpha.-phenylethylamine](olefin)] where olefin is propylene, styrene, and cis- and trans-2-butene, possessing 2 different diastereoisomers in equil. in soln. The olefin should not contain symmetry planes perpendicular to the plane of the double bond and the olefin and optically active ligand should be coordinated to a transition metal. The prepn. is carried out through exchange in CH2Cl2 with the corresponding ethylene complex.

IT **1682-01-5**, Phosphorane, ethylenebis[difluorodimethyl- (prepn. and properties of)

RN 1682-01-5 CAPLUS

CN Phosphorane, ethylenebis[difluorodimethyl- (7CI, 8CI) (CA INDEX NAME)


F
F
P
Me
Me
F
Me
CH2
CH2
P
Me
F

FILE 'CASREACT' ENTERED AT 11:10:43 ON 15 DEC 2003

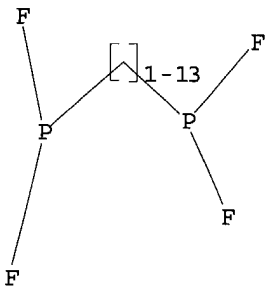
FILE 'CASREACT' ENTERED AT 11:12:21 ON 15 DEC 2003

FILE 'BEILSTEIN' ENTERED AT 11:15:15 ON 15 DEC 2003

=>
Uploading 10084681.str

L22 STRUCTURE UPLOADED

=> d
L22 HAS NO ANSWERS
L22 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 2/p
L23 46066 2/P

=> s l23 and f/els
530531 F/ELS
L24 2866 L23 AND F/ELS

=> s l22 subset=l24
ENTER SUBSET SEARCH SCOPE - SAMPLE, FULL, RANGE, OR (END):sam
SAMPLE SUBSET SEARCH INITIATED 11:16:36 FILE 'BEILSTEIN'
SAMPLE SUBSET SCREEN SEARCH COMPLETED - 3 TO ITERATE

100.0% PROCESSED 3 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.02

PROJECTIONS (WITHIN SPECIFIED SUBSET): ONLINE **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET): 3 TO 163
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET): 1 TO 80

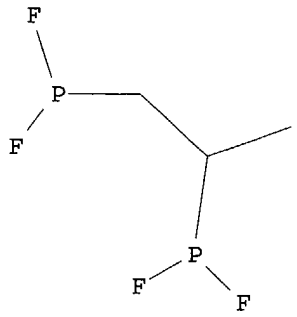
L25 1 SEA SUB=L24 SSS SAM L22

=> d ide

L25 ANSWER 1 OF 1 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Beilstein Records (BRN): 2234188
Beilstein Pref. RN (BPR): 53432-50-1
CAS Reg. No. (RN): 53432-50-1
Molec. Formula (MF): C3 H6 F4 P2
Molecular Weight (MW): 180.02
Lawson Number (LN): 3764

Compound Type (CTYPE): acyclic
Constitution ID (CONSID): 2035936
Tautomer ID (TAUTID): 2128109
Beilstein Citation (BSO): 5-04
Entry Date (DED): 1989/06/29
Update Date (DUPD): 1991/01/23



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
IR	Infrared Spectrum	1
MP	Melting Point	1
MS	Mass Spectrum	1
NMR	Nuclear Magnetic Resonance	1
VP	Vapour Pressure	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=>

=> d his

(FILE 'HOME' ENTERED AT 10:31:40 ON 15 DEC 2003)

FILE 'REGISTRY' ENTERED AT 10:34:58 ON 15 DEC 2003
L1 STRUCTURE UPLOADED
L2 5 S L1
L3 71 S L1 FULL

```
L4            60 S L3 NOT N/ELS
L5            50 S L4 NOT O/ELS
L6            58 S L4 NOT ETHYNE?
L7            58 S L6 NOT ETHYNE?
L8            53 S L7 NOT S/ELS
L9            46 S L8 NOT O/ELS
L10           43 S L9 NOT B/ELS

     FILE 'CAPLUS' ENTERED AT 10:39:33 ON 15 DEC 2003
L11           34 S L10

     FILE 'REGISTRY' ENTERED AT 10:46:46 ON 15 DEC 2003
L12            0 S BIS DIETHYLFLUOROPHOSPHORA? ETHANE
L13            0 S BIS DIETHYLFLUOROPHOSPH? ETHANE
L14            0 S BIS DIETHYLDIFLUOROPHOSPH? ETHANE
L15            0 S BIS DIETHYL DIFLUORO PHOSPHOR? ETHANE
L16            0 S BIS DIETHYL DIFLUORO PHOSPHOR? ETH?
L17            0 S  DIETHYL DIFLUORO PHOSPHORANE ETHYLENE

     FILE 'REGISTRY' ENTERED AT 10:57:25 ON 15 DEC 2003
L18            2 S C10F28P2/MF

     FILE 'CAPLUS' ENTERED AT 10:58:35 ON 15 DEC 2003
L19            4 S L18
L20            1 S L10 AND ELECTROLY?
L21            1 S L10 AND .OMEGA.

     FILE 'CASREACT' ENTERED AT 11:10:43 ON 15 DEC 2003

     FILE 'CASREACT' ENTERED AT 11:12:21 ON 15 DEC 2003

     FILE 'BEILSTEIN' ENTERED AT 11:15:15 ON 15 DEC 2003
L22              STRUCTURE UPLOADED
L23         46066 S 2/P
L24          2866 S L23 AND F/ELS
L25             1 S L22  SUB=L24 SAM

=> s l22 subset=l24 full
FULL SUBSET SEARCH INITIATED 11:17:05 FILE 'BEILSTEIN'
FULL SUBSET SCREEN SEARCH COMPLETED -      82 TO ITERATE

100.0% PROCESSED       82 ITERATIONS                                  37 ANSWERS
SEARCH TIME: 00.00.05

L26           37 SEA SUB=L24 SSS FUL L22

=> s l26 not (n/els or o/els)
       5710939 N/ELS
       7711448 O/ELS
L27           31 L26 NOT (N/ELS OR O/ELS)

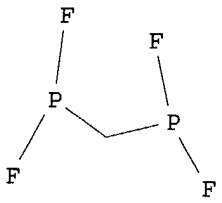
=> s l27 not l25
L28           30 L27 NOT L25

=> s l28 not phenyl
       2091959 PHENYL
             1 PHENYLS
       2091960 PHENYL
                 (PHENYL OR PHENYLS)
L29           30 L28 NOT PHENYL

=> d ide 30
```

L29 ANSWER 30 OF 30 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Beilstein Records (BRN):	1920262
Beilstein Pref. RN (BPR):	60839-30-7
CAS Reg. No. (RN):	60839-30-7
Molec. Formula (MF):	C H2 F4 P2
Molecular Weight (MW):	151.97
Lawson Number (LN):	689
Compound Type (CTYPE):	acyclic
Constitution ID (CONSID):	1759100
Tautomer ID (TAUTID):	1836115
Beilstein Citation (BSO):	5-01, 6-01
Entry Date (DED):	1989/06/29
Update Date (DUPD):	1996/08/09



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	2
ED	Entry Date	1
UPD	Update Date	1
BP	Boiling Point	1
NMR	Nuclear Magnetic Resonance	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	2
RXPRO	Substance is Reaction Product	2

=> d his

(FILE 'HOME' ENTERED AT 10:31:40 ON 15 DEC 2003)

FILE 'REGISTRY' ENTERED AT 10:34:58 ON 15 DEC 2003

L1 STRUCTURE UPLOADED
L2 5 S L1
L3 71 S L1 FULL
L4 60 S L3 NOT N/ELS

```
L5            50 S L4 NOT O/ELS
L6            58 S L4 NOT ETHYNE?
L7            58 S L6 NOT ETHYNE?
L8            53 S L7 NOT S/ELS
L9            46 S L8 NOT O/ELS
L10           43 S L9 NOT B/ELS

     FILE 'CAPLUS' ENTERED AT 10:39:33 ON 15 DEC 2003
L11           34 S L10

     FILE 'REGISTRY' ENTERED AT 10:46:46 ON 15 DEC 2003
L12            0 S BIS DIETHYLFLUOROPHOSPHORA? ETHANE
L13            0 S BIS DIETHYLFLUOROPHOSPH? ETHANE
L14            0 S BIS DIETHYLDIFLUOROPHOSPH? ETHANE
L15            0 S BIS DIETHYL DIFLUORO PHOSPHOR? ETHANE
L16            0 S BIS DIETHYL DIFLUORO PHOSPHOR? ETH?
L17            0 S  DIETHYL DIFLUORO PHOSPHORANE ETHYLENE

     FILE 'REGISTRY' ENTERED AT 10:57:25 ON 15 DEC 2003
L18            2 S C10F28P2/MF

     FILE 'CAPLUS' ENTERED AT 10:58:35 ON 15 DEC 2003
L19            4 S L18
L20            1 S L10 AND ELECTROLY?
L21            1 S L10 AND .OMEGA.

     FILE 'CASREACT' ENTERED AT 11:10:43 ON 15 DEC 2003

     FILE 'CASREACT' ENTERED AT 11:12:21 ON 15 DEC 2003

     FILE 'BEILSTEIN' ENTERED AT 11:15:15 ON 15 DEC 2003
L22              STRUCTURE UPLOADED
L23        46066 S 2/P
L24         2866 S L23 AND F/ELS
L25            1 S L22  SUB=L24 SAM
L26           37 S L22 FULL SUB=L24
L27           31 S L26 NOT (N/ELS OR O/ELS)
L28           30 S L27 NOT L25
L29           30 S L28 NOT PHENYL

=> s l10
L30           20 L10

=> s l29 not l30
L31           13 L29 NOT L30

=> d ide


L31  ANSWER 1 OF 13 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

     Beilstein Records (BRN):          8605815
     Molec. Formula (MF):              C13 F34 P2
     Molecular Weight (MW):            864.04
     Lawson Number (LN):               1543, 1158
     Compound Type (CTYPE):            acyclic
     Constitution ID (CONSID):         7292920
     Tautomer ID (TAUTID):             8094695
     Entry Date (DED):                 2000/10/24
     Update Date (DUPD):               2000/10/24
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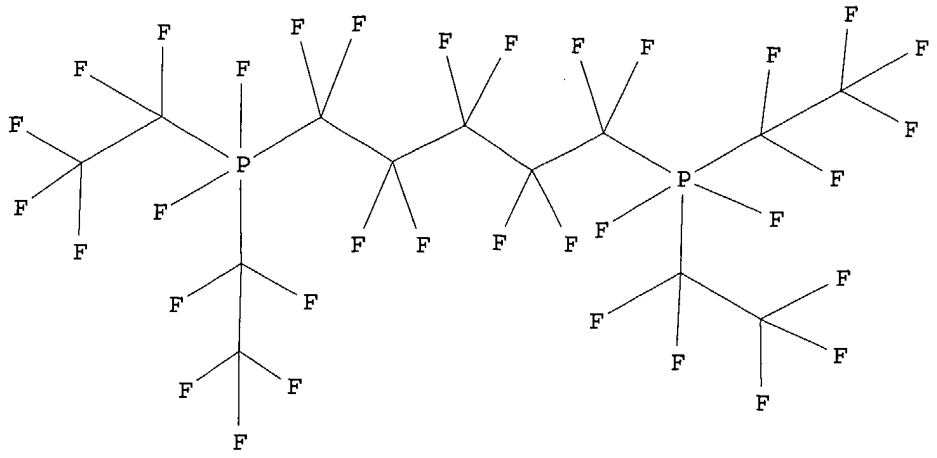


Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
FBRN	Fragment BRN	2
LN	Lawson Number	2
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
NMR	Nuclear Magnetic Resonance	3

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d rxpro

L31 ANSWER 1 OF 13 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Reaction:
RX

Reaction ID (.ID):	8553814
Reactant BRN (.RBRN):	1746237
Reactant (.RCT):	1,5-bis-diethylphosphino-pentane
Product BRN (.PBRN):	8605815
Product (.PRO):	C13F34P2
No. of React. Details (.NVAR):	1

Reaction Details:
RX

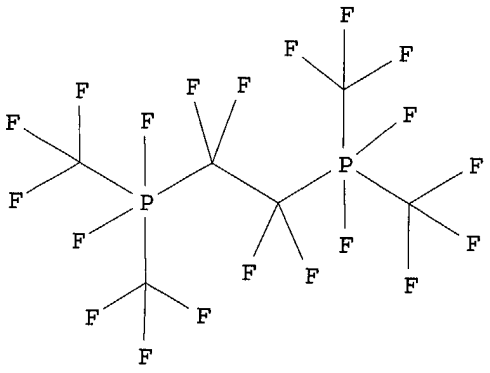
Reaction RID (.RID):	8553814.1

Reaction Classification (.CL): Preparation
Reagent (.RGT): F2
Solvent (.SOL): various solvent(s)
Time (.TIM): 12 hour(s)
Temperature (.T): -60 Cel
Reaction Type (.TYP): Fluorination
Reference(s):
1. Kampa, J. J.; Nail, J. W.; Lagow, R. J., J.Fluorine Chem., CODEN: JFLCAR, 102(1-2), <2000>, 333 - 336; BABS-6244086

=> d ide 2

L31 ANSWER 2 OF 13 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Beilstein Records (BRN): 8594068
Molec. Formula (MF): C6 F20 P2
Molecular Weight (MW): 513.98
Lawson Number (LN): 1763, 1518
Compound Type (CTYPE): acyclic
Constitution ID (CONSID): 7283815
Tautomer ID (TAUTID): 8072949
Entry Date (DED): 2000/10/24
Update Date (DUPD): 2000/10/24



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
NMR	Nuclear Magnetic Resonance	3

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=>

=> d frxpro

L31 ANSWER 1 OF 13 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Reaction:
RX

Reaction ID (.ID):	8553814
Reactant BRN (.RBRN):	1746237
Reactant (.RCT):	1,5-bis-diethylphosphino-pentane
Product BRN (.PBRN):	8605815
Product (.PRO):	C13F34P2
No. of React. Details (.NVAR):	1

Reaction Details:
RX

Reaction RID (.RID):	8553814.1
Reaction Classification (.CL):	Preparation
Reagent (.RGT):	F2
Solvent (.SOL):	various solvent(s)
Time (.TIM):	12 hour(s)
Temperature (.T):	-60 Cel
Reaction Type (.TYP):	Fluorination

Reference(s):
1. Kampa, J. J.; Nail, J. W.; Lagow, R. J., J.Fluorine Chem., CODEN: JFLCAR, 102(1-2), <2000>, 333 - 336; BABS-6244086

=> d frxpro 2

L31 ANSWER 2 OF 13 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Reaction:
RX

Reaction ID (.ID):	8553194
Reactant BRN (.RBRN):	1732994
Reactant (.RCT):	1,2-bis-dimethylphosphino-ethane
Product BRN (.PBRN):	8594068
Product (.PRO):	C6F20P2
No. of React. Details (.NVAR):	1

Reaction Details:
RX

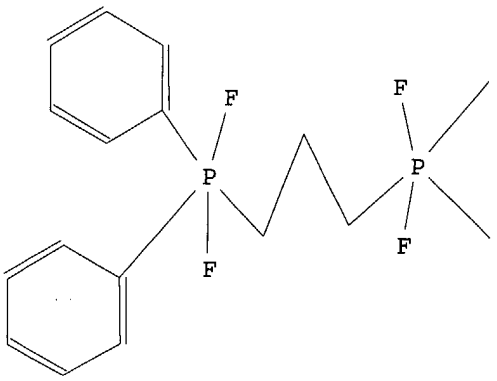
Reaction RID (.RID):	8553194.1
Reaction Classification (.CL):	Preparation
Reagent (.RGT):	F2
Solvent (.SOL):	various solvent(s)
Time (.TIM):	12 hour(s)
Temperature (.T):	-60 Cel
Reaction Type (.TYP):	Fluorination

Reference(s):
1. Kampa, J. J.; Nail, J. W.; Lagow, R. J., J.Fluorine Chem., CODEN: JFLCAR, 102(1-2), <2000>, 333 - 336; BABS-6244086

=> d ide 13

L31 ANSWER 13 OF 13 BEILSTEIN COPYRIGHT 2003 BEILSTEIN MDL on STN

Beilstein Records (BRN):	2766916
Molec. Formula (MF):	C17 H22 F4 P2
Molecular Weight (MW):	364.30
Lawson Number (LN):	16731, 3763, 3761
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	2504081
Tautomer ID (TAUTID):	2616441
Beilstein Citation (BSO):	5-16
Entry Date (DED):	1989/07/11
Update Date (DUPD):	1989/07/11



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1
NMR	Nuclear Magnetic Resonance	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1